1: Hocart Y-5 (ca. 1920) 1929 OQ6 Lau OQ6
Lakemba

pre-Christian. The clans of Nangalingali are: Naivotavota, Tanggu, Nanggora, Matai.

The Naivotavota and Tanggu are noble and descended from two brothers, Tanggu being descended from the eldest; but no one was made Tui Kambara. The ancestor of the two clans came from Uangava (Vuanggava). The third clan is "the Land"; the fourth, which is partly Tongan, is the carpenter's clan, and to it belong the Lemaki (p. 55).

There was much fighting between the villages of Nangalingali and Tokalau for the leadership in Christian times. The present Tui Kambara is of Tokalau.

Nukuloa in Vanua Levu is *tauvu* to Kambara on account of the ancestor-god. Kambara people at one time went to plant in Lakemba. On account of the ladies the people of Kambara used to go to Tanggalevu so in course of time Tanggalevu were made envoys to Kambara. Kambara is also connected with Totoya. There is a strong connection with Tonga because the Tongans formerly built canoes in Kambara.

Komo and Namuka are colonies of Kambara. Komo, a noble land before the inhabitants were killed off by Kambara and Totoya, now has only one village. It was settled from Kambara in fairly recent times. The clans are: Tuvana, Nukusea, Folo, Nasau.

Namuka has only one village, a large one, which was peopled from Nangalingali. Its clans are: Toiovu, Mbautolu, Nawatia, Taliku, Nasau, Nanggalitoka, Sawa. The first Tui Namuka dates from Christian times. Namuka and Matuku are closely related. Namuka goes to Nukunuku in Lakemba.

In Namuka the water is so scarce that in times of drought it is brought from neighboring islands.

FULANGA AND ITS DEPENDENCIES

Fulanga (Vulanga) is an exceedingly low-born land. Formerly when its people went to Kambara, Mothe, or Lakemba, they walked stooping with folded arms. The island constantly suffers from scarcity. The people are great fishermen and excel with the fish spear. Their hair is said to be fair as a result of their constant diving, but I have seen only one fair haired individual from this island. (See Pl. I, *H*.) Fulanga and Ketei in Totoya are *tauvu*. Ongea, Ono, Mothe, and Oneata are dependencies of Fulanga. Regarding these I have received the following from informants:

Ongea was once a noble (*turanga*) land. Its pennant was hoisted in some peculiar position aloft, whereas Fulanga flew its flag below. The old men of the island used to be known as "the holy elders" (*matua tambu*). When Tui Ongea was on board a

2: Thompson E-5 (1933-1934)1940 OQ6 Lau OQ6
Kambara

have calm, shallow lagoons, abounding in fish and shellfish which are an important part of the diet. Most of these islands are deficient in food but rich in timber and jungle produce which provide the raw materials for their industries.

Lau has a tropical climate. During the dry season, which lasts from April to October, the cooling southeast trades blow regularly and the seas are calm. An extensive interisland canoe traffic is carried on during these months. The remainder of the year is rainy and warm with irregular winds, especially during the "hurricane" months of January, February, and March. Fortunately hurricanes are infrequent. Drought is a constant menace on the limestone islands, for rain is quickly absorbed by the sharp, porous limestone. There are no streams and practically all the fresh water used by the natives must be collected in tanks and utensils. On each island there are a few water holes which are usually brackish, but the native technique of living requires little fresh water.

The population of the islands is concentrated in coast villages. Each village is located on a sandy flat along the beach and is usually surrounded by a coconut grove. Frequently the site is planted with breadfruit trees. Usually the village land is divided into strips, which run from the beach to the cliffs; and each strip is owned and occupied by a clan (*matanggali*, formerly a hamlet in garden land or bush clearing, see p. 35). The clans of highest rank occupy the center of the village. Their houses dominate the ceremonial ground (*rara*), where village feasts are distributed and ceremonies, dances, and games are held.

A description of the islands and villages which were studied follows.

Kambara

Kambara is a basin-shaped mass of limestone, about 4.5 miles long and 3 miles wide. The rim of the basin is an irregular ridge about 60 meters high. Here and there the precipitous, seaward cliff falls away, giving space to a sand flat grown with coconut palms. On such flats are situated the four villages of the island: Tokalau, Lomatchi, Nggalinggali, and Undu. Kambara is nearly surrounded by a coral reef which breaks on the northwest coast, providing the only anchorage. The village of Tokalau is located opposite the anchorage.

Kambara combines the natural resources of both volcanic and limestone islands. The heavily forested interior of the island is honeycombed with pits and caverns. Pockets of red, residual soil of an acre or so are cultivated on the eastern edge of the basin and in the center where the elevation is only about 24.4 meters. A volcanic outcrop, Ndelaioloi, rising in the northwest part of the island to a height of 143.3 meters, provides the island's best soil, and here most of the gardens are located. The main garden products are manioc and sweet potato. A coarse quality of pandanus grows on Kambara. The principal

2: Thompson E-5 (1933-1934)1940 . OQ6 Lau OQ6
Kambara

621 133 [312] Fresh water is scarce in Tokalau. The village reservoir is out of repair. Rain water is collected in small tanks or barrels from the tin roofs of several houses, and from a fresh water hole (named Nai Mariko), located in the nearby bush. Two concavities in the village mark the dry sites of brackish water holes.

621 133 712 Old informants say that at least some of the ancestors of Tokalau inhabitants lived in Nakorovusa (p. 217), a fortress on the cliffs above Tokalau, before moving in Christian times, when Manoa was chief of Kambara, to Nakoro, the old village of Tokalau. Tokalau people also occupied Ndelaioloi (p. 218), the fortress at the summit of the hill above the village. Naisevou (p. 216; fig. 21), a fortified village just below Nakorovusa, was built by the nobles of Tokalau; and Korokoroilulu, on the slopes of Ndelaioloi, was a hamlet of the Katoka clan of the land people, the aboriginal inhabitants of Kambara.

LOMATCHI

621 133 Lomatchi, the lowest ranking village on Kambara, lies half a mile south of Tokalau on the west coast of Kambara at the foot of Ndelaioloi. Its title is Numbaravi. Lomatchi, the smallest village on the island, has only 47 inhabitants, occupying nine sleeping houses. Most of the houses are built directly on the ground, since many houses built on stone-faced mounds were destroyed by a hurricane a few years ago. The houses form two rows, one on each side of the road, which runs parallel to the shore. A path to the gardens on Ndelaioloi, where Lomatchi owns a relatively large amount of good garden land, meets the road at the north end of the village. The village fishing grounds, which extend along the adjacent shore from Vatu Loaloa to Salia, are the best on Kambara.

[312] A concrete reservoir provides fresh water for the village, and brackish water is obtained from a hole 250 meters northward.

Informants say that formerly the natives of Lomatchi occupied Nawi and Old Lomatchi hamlets in the garden land above the present village site. They used two fortresses on the cliffs above the present village, Nakoroyangai to the south, and Nakaka (p. 218) to the north. In Christian times they moved to Vuniviavia (also called Vuninggalaka), a village site between Lomatchi and the cliffs. There is a dispute between the elders of west Kambara concerning the name of this site. During the epidemic of measles in Lau (1875) they moved to Naisauvesi on the sandy flat north of the village where the house sites may be seen, and thence to the present village site.

NGGALINGGALI

[712] Nggalinggali (called Tanggu by the natives) is the ranking village on the east side of the island. Its title is Na Koro, the name of the fortress site on the cliff above the village.

2: Thompson E-5 (1933-1934)1940 OQ6 Lau OQ6
Kambara

the cliff above the village. Nggalinggali is situated toward the north end of Kambara within easy sailing distance of the valuable, uninhabited island of Wangava. With 154 inhabitants, it is the largest village on Kambara. Its 32 sleeping houses are near the beach in two rows, one on each side of the road, which runs parallel to the shore. Most of Nggalinggali's garden lands are on Wangava, but some are found on the slopes of Ndelaioloi, in the interior Kambara basin, and on the ridge above the village. A path leads from the northwest corner of the village, up the steep cliff into the interior basin, and across the island. It connects Nggalinggali with Ndelaioloi, and the villages of Tokalau and Lomatchi. These villages, as well as Undu, may also be reached by skirting the island in a canoe or on foot at low tide.

The reservoir is out of repair, but brackish water is obtained from two water holes, one at the north end and one at the south end of the village.

On the sandy flat north of the village, are house sites of the old village of Tanggu, occupied immediately before the present site. On the limestone cliffs above Nggalinggali are the ruins of Nakoro (p. 218), a walled fortress which was used by the Nggalinggali group. Adjoining Nakoro on the southwest is Matanaiundu, a small fort which supplemented Nakoro.

At Naimarai near Naikeleangga on the north point of the island is a cemetery and village site, which, according to the natives, was formerly occupied by Tongan canoe builders. The ditch across which the hull of a double canoe was laid while under construction may still be seen. The natives say that near this spot was situated an assembly house (*vale ni mbose*), used as a meeting place for representatives from the two hostile sides of the island.

UNDU

Undu is the most isolated village on Kambara. Located on the east shore about two miles south of Nggalinggali, it is farthest from the island's anchorage at Tokalau and least touched by western influence. In Undu are concentrated the descendants of the land people (*kai vanua*) of Kambara, the aboriginal inhabitants of the island. The village has 120 inhabitants occupying 24 sleeping houses. Its title is Raviravimbalavu.

Undu is connected with Ndelaioloi, Tokalau, and Lomatchi by a rough, narrow path, which ascends the steep precipice above the village and leads through the bush across the island. The village garden lands are located on Ndelaioloi and on Marambo, a small uninhabited limestone island about seven miles east of the village.

The reservoir is in repair. On the northern outskirts of the village, fresh water drips from the cliff and is caught in wooden bowls. There is also a fresh water hole about 250 meters south of the village in the cliff. On the beach a mile south of Undu lies a salt water hole about 12 meters deep and 2 meters in diameter, used for fermenting food.

2: Thompson E-5 (1933-1934)1940 OQ6 Lau OQ6

621 133 Paths connect the villages with garden lands along the coast and in the valleys. The landing opposite the passage on the east coast may be reached from the villages at either high or low tide by walking along the beach, which partially surrounds the island.

[312] Fresh water is obtained from the island creeks and from a large reservoir in Nasau.

[712] There are two important fortresses on Mothe: Ndelaimakotu, crowning the summit, and Ndelaimothe on a hill southwest of Ndelaimakotu.

Little information could be obtained concerning movements of the Mothe groups. According to informants, the Kamali clan has moved as follows:

166 621 At the time of Mirakilangi, seven generations ago, Kamali was living in Ndelaimothe with the Nasau, Nggali, and Vanganduku clans. Mirakilangi moved with the Kamali group to the hamlet, Tokanga, on the beach. At the time of Mbatchinimalungu, five generations ago, the Valelevu subclan lived at Wanggathiri and the Vunikavika subclan at Kauyawa, two hamlets on Kamali land in west Mothe. The two groups moved to the hamlet, Nggali. At the time of Siasi, three generations ago, they moved to the present site of Nasau. In the last generation Korotolu people have moved from Nggali to Vanganduku, thence to Leva, and thence to Korotolu, the present village site. Natives say that each move was made because of a hurricane or a tidal wave.

Fulanga

621 133 Fulanga is a horseshoe-shaped limestone island 5 miles long and about 3.5 miles wide, surrounded by a fringing reef. A ridge up to 79.2 meters high forms the backbone of the island. The island itself almost encircles a large, central lagoon, rich in fish and dotted with 300 to 400 mushroom-shaped islets.

Fulanga is a "famine" island producing insufficient food to cover the needs of the population. The soil is poor, and practically the only garden products are manioc and breadfruit. Fulanga raises a relatively large number of chickens. Her main resources are hardwoods, fish, shellfish, and pandanus of good quality.

Salia, the narrow, shallow passage to the central lagoon, is difficult even for small craft. The only anchorage is at Yawalevu on the south shore of the central lagoon. A path from Yawalevu runs southwestward over the island ridge through Muanaithake, one of the three villages on Fulanga. Muanaithake is located in an indentation on the south coast of the island. The same path connects Muanaithake with Muanaira village on the beach half a mile westward. At Muanaira the path turns northward to Vatuolo, a canoe landing at the southwest corner of the central lagoon. From Vatuolo it skirts the central lagoon through the bush to Naivindamu village on the northwest shore of the lagoon. Paths also connect Muanaithake with its meager garden lands, most of which lie east of the village on the southern horn of the island.

The large central lagoon provides Fulanga with the best fishing grounds

2: Thompson E-5 (1933-1934)1940 OQ6 Lau OQ6

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133

both sides of the village, are very poor. The men are expert fishers and the best sailors of Fulanga, an island noted for skill in navigation.

[221]

At Naivindamu the high tide mark almost reaches the kitchen huts along the beach. Between the months of January and March, when mosquitoes are troublesome in the village, the people sleep in temporary shelters on Matafeke, an island in the central lagoon swept by the southeast trades. Four huts have been built on the table top of the island, which is not more than 15 meters in diameter. Matafeke is about 400 meters from Naivindamu and is reached by canoe and scaled at low tide by means of a wooden stepladder.

In the garden land on the lagoon shore about 1,200 meters south of Naivindamu lies the old hamlet site of Toka below the hill fortress of Tchinambua. The Naivindamu people say that both sites were occupied by their ancestors who moved from Toka to the present site. When Williams (*27*, vol. 2, p. 122), the first European missionary to visit Fulanga, came to the island in June 1842, he found four settlements: Toka, Naivindamu, Muanaira, and Muanaithake. The locations of the settlements are not stated, but it is probable that the inhabitants of Toka have moved within the last century to the southwest end of Naivindamu where they have formed the clan hamlet of Toka. Members of the Toka clan know little of their pedigrees.

Ongea

The two main islands in the Ongea group are Ongea Levu, about 4 by 2 miles, and Ongea Ndriki, 1 by 1.8 miles. The maximum elevation of Ongea Levu is 91.4 meters. A barrier reef, encircling both limestone islands, encloses a deep lagoon which affords the best anchorage in southern Lau. Hence Ongea is visited by ships more frequently than the other southern islands.

The only village in the Ongea group is Naithulaianga, situated on an inlet at the southern end of Ongea Levu. No census was taken on Ongea, but the village headman said that the population of the village was 102. There are 25 sleeping houses in the village. Naithulaianga is connected with its garden lands by paths running northward into the interior of Ongea Levu. There are also garden lands and temporary huts on Ongea Ndriki. Though the Ongea soil is not rich it is better than that of Fulanga and the food problem is not so acute. The crops are manioc, sweet potatoes, and bananas. The principal resources of the island are hardwoods.

Naithulaianga is built on the shore of the lagoon. The high tide line is only a meter or two from the kitchen huts, two of which are protected by a limestone retaining wall 75 cm. high. Many of the houses in the village stand upon stone-faced mounds from 75 cm. to 1.5 meters high. According to the natives the village is flooded during hurricanes.

[12]

Fresh water is obtained from a concrete reservoir.

3: Thompson E-5 (1933-1934) 1940 OQ6 Lau OQ6
Kambara

stones. It is covered with green leaves and earth and steamed for an hour or more. With the "true food" is served a dish consisting of fish, if possible, and edible green leaves boiled in coconut cream. The ingredients for the boiled dish are gathered and prepared in large imported iron pots by the women. Formerly earthenware pots made in Lau were used, but pots are no longer made.[2] Without fish the meal is considered very poor indeed.

Most families have sufficient initiative to cope with the food problem in years of normal rainfall, so that the islands are practically self-sufficient. But when a violent hurricane sweeps over the islands, destroying harvests and habitations—or a long, searing drought withers the crops—even the coarsest edible jungle roots will not cover the needs of the famine island inhabitants, who would starve without the rice and flour which are rushed to their aid by the colonial government in Suva. Such a hurricane occurred in 1936.

Fortunately catastrophes of this kind do not occur often, but drought is a constant menace. Rain is quickly absorbed through the sharp, porous limestone. There are no streams and only a very few water holes, which are usually brackish. Practically all the fresh water used by the natives must be collected in tanks and wooden bowls from roofs of imported sheet iron or of thatch. The natives, however, require amazingly little fresh water. They drink the sweet milk of the young coconut, steam their food in the earth oven or boil it in coconut cream, and bathe in the sea. Only since they have donned *lavalavas* of cloth have they needed fresh water for laundering. The government has aided the natives in building small cement reservoirs roofed with sheet iron for each village, but the natives are so little concerned with the lack of fresh water that they do not repair the reservoirs, and few of them are in use.

[2] L. Thompson, "The Pottery of the Lau Islands, Fiji," *Journal of the Polynesian Society*, Vol. 47, No. 3, 1938.

3: Thompson E-5 (1933-1934) 1940 OQ6 Lau OQ6
Kambara

291 rank. Outside a village the natives often wind a piece of cloth about their heads as a protection against the sun. Hats are not worn.

292 For Sunday services in the mission church, and ceremonies in honor of visiting British officials on Kambara, the men tuck a clean white shirt into the *lavalava* and the women don [294] a simple sleeveless blouse. Clothes are sewn on a few sewing machines which found their way to the islands during the prosperous days of the copra trade. Lately the natives have [435] had some difficulty in keeping themselves clothed on account of the low price of copra which they exchange for cloth at the local store in Tokalau. Clothes are usually very ragged, especially those of the old people, and occasionally instead of trade cloth a gunny sack or a fringe of banana leaves is worn while working in the gardens.

296 The introduction of cloth brought a laundry problem to 312 Kambara, an island where fresh water has always been scarce. At the present time most of the fresh water collected on Kambara and also the brackish water from the springs is used for washing clothes. Soap, bluing and heavy charcoal irons for pressing must be bought at the store. On Saturday mornings the young girls wash near the water barrels under the eaves. Beating the clothes with a stick against a board, they raise a billowing froth of rainbow-hued suds to make up for lack of water.

515 Considering the rough close-to-nature existence, and the 136 lack of fresh water on these islands, I was impressed with the personal cleanliness of the Lauans. Men, women and children bathe daily in the lagoon, usually at sundown before the evening meal. This is done in spite of the danger of sharks which are common in these waters. Children are [868] taught from babyhood to keep a keen lookout for their dark menacing forms, which are occasionally seen darting about in the lagoon right up to the shore line.

[ONGEA ISLANDS]

13 From the latter[1] a good trail leads across the central flat to the [487] village. The bay on the south side of Ongea Levu is too shallow for vessels larger than small cutters to enter.

● 317 There is no fresh water other than rainwater which is caught and stored in a cement cistern at the village.

136 No wild animals other than rats, lizards and snakes occur on these islands. There is a large green lizard called "vokai" by the natives, and one (perhaps two) species of gray-brown snakes. The natives report wild goats, but neither they nor their tracks were seen..

361 [161] 241 All the inhabitants, about 100 in number, live in the village on Ongea Levu, but they cultivate considerable areas on both Levu and Ndriti. The principal products raised are manioc, sweet potato, 245 yams, taro and bananas. The coconut groves are not so extensive as the area of the islands would permit, but they apparently produce sufficient copra to supply the humble wants of the natives.

181 144 320 285 287 231 The people are industrious and fairly intelligent despite their isolation. There is a more or less distinct Tongan cast. Wood carving, mat weaving and tapa beating are carried on to some extent, and numbers of canoes are cut in the thick woods. Pigs and a few fowl are raised, and dogs are kept as pets.

[1] [i.e.—anchorage on the West side of Ongea Levu. —Analyst]

[p.13]

[FULANGA I]

312 Water is available only at the villages where rainwater is caught and stored in cement tanks.

13 The limestone hills are thickly covered with the usual lowland forest. The flats on both sides support extensive groves of coconut palms and cultivated areas. Mangrove thickets border the S.W. side of the lagoon.

The animals include birds, rats, lizards and probably snakes, although none of the latter were seen, except the banded water snake. [231] The natives have domestic fowls, pigs and dogs. Mosquitoes present.

361 There are three small villages on Fulanga. Muanaithake and Muanaira are close together on the south ocean side. The former [161] has a population of about 200, living in 40 houses; the latter is much smaller, about a dozen houses and 40 inhabitants. Naividamu is situated on the N.W. arm, on the lagoon side. It has a population 487 of 64, living in a dozen huts. The three villages are connected by a good path.

181 The people appear prosperous and fairly industrious. The women 462 catch fish and dive for shell fish and oysters within the lagoon. The [226] men do the reef fishing and cultivate the fields. Canoe making and 241 some carving is done, and the women weave mats and beat out masi (tapa). [320] 285 Some little copra is cut and shipped and the usual crops of sweet [287] potatoes, yams, manioc and bananas are grown, the latter for local 295 consumption only. 241

[p. 16]

13 S. MALAMBO is a very small, flat, sand and coral islet, about 150 by 250 feet, surrounded by a nearly square reef, less than a mile across. It is ten miles north of Ongea Levu and six miles east of Yangasa Levu, with two small patches of reef to the south and one small and one large reef to the north-west. (18° 57'30" S, 178° 22' W.) It is recorded as being 40 feet high, but is in reality scarcely 30 feet to the tops of the trees.

There is a narrow, winding passage thru the reef off the north end of the island, thru which row boats can enter at moderate or high tide. No anchorage.

●[312] No water on the island.

The west side is bordered by a beach of sand and broken coral. The east side has a rocky beach covered with low herbs: Portulaca, Sesuvium and Boerhaavia. The central portion of the island is flat, more or less sandy, and covered with an open stand of stunted "buka" trees (Pisonia ?), 8 to 15 feet high, abruptly truncated on top by the wind and salt spray, and full of nesting boobies. A colony of frigate birds were nesting in the herbs on the south-east side.

The largest land animals besides the birds consisted of geckos, skinks and hermit crabs. Insects included red and black ants, several species of small flies, a robust Sarcophagid fly, small moths, a pale brown cricket, small beetle, mites, crustacia isopod, and spiders.

[223] [484] No sign of inhabitants, although the islet is occasionally visited by natives for birds. No coconut palms.

[p. 18]

[YANGASA CLUSTER]

13 the N. and N.E. slopes. There are no beaches. Landing is possible in smooth weather on the west side.

NAVUTU-I-RA , a mile further to the north-west, is 1/2 mile in diameter and 270 feet high. It is connected with Yavutha by a narrow sunken reef on which are situated a number of small rocks. The slopes of this island are quite rough, but there is a small, nearly level flat on the N.W. Both flat and slopes are heavily wooded. A small sand beach on the south side makes landing easy.

●[312] There is no fresh water on the three smaller islets, and only the one pool noticed on Yangasa Levu.

Snakes are abundant and rats are probably present. Lizards and hermit crabs are ~~abundant~~ numerous.

These limestone islands have an exceedingly rough surface, which warrents the nick-name "bad-lands". This consists of jagged ridges (or rather hummocks, as they lead nowhere), separating pot-holes up to 50 feet in diameter and often 15 to 25 feet deep. The walls are sh eer and unbelievably rough and jagged, ruining shoes, clothes and skin. This type of country, however, is well forested.

[p.21]

13 [361] 5. MANUKA-I-LAU lies about 8 miles N.W. of the Yangasa Cluster. (Village: S.18° 51', 178° 38' W.) It is rectangular in shape, a little over 4 miles long by 1 broad, and composed of coral limestone. A barrier reef, reduced to a chain of coral heads on the N.W., surrounds the island. On the north side of the island a rough ridge of upraised coral limestone rises abruptly from the sea to a height of 260 feet, and on the S.W. there is a short ridge up to 240 feet high. [361] The village is located on a large bay facing the south, and another sandy bay is located at the west end. Each contains two small islets. The interior is a flat covered with extensive groves of coconut palms and cultivated areas. Along the ridges and at each end is lowland forest. There is a small marsh near the village.

The south bay is shallow and inaccessable. Good anchorage may be had within the reef off the north side. A trail leads over the [487] ridge from a landing situated half way between the highest peak (260') and a more conspicuous double peak (210'), near a coconut grove.

● [312] Rainwater is caught and stored at the village.

No land snakes, but water snakes are to be found occasionally on the rough coral beaches. Rats, hermit crabs and lizards are present. Mosquitoes and dragonflies ~~[illegible]~~ numerous.

361 161 The village is of moderate size, with over 50 houses and a population of about 216. The inhabitants are industrious and prosperous 181 295 cutting a large amount of copra and farming extensive cultivated areas. 291 There is a Chinese store. There is considerable beating of masi (tapa), 177 but very little carving.
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[p. 23]

13 7. ONEATA is a partly coral limestone, partly bedded sandstone island, lying about 12 miles north of Mothe. (S.18° 25', 178° 30' W.) It is 2 1/2 miles long and about 7/8 mile wide, pointed at both ends, and with three small wooded peaks up to 160 feet high on the south-east. Toward the east end there are two cross-ridges covered with forest. Off the east point a small conical islet, Loa, rises to a height of 140 feet. The west end has a sandstone hill, covered with grass, scrub, Pandanus and Casuarina. A volcanic ledge borders the east point. The central portion of the island is occupied by a narrow brackish swamp. South of it (between the two villages) are to low knobs or ridges of sandstone. On the north side of the low central depression is a large area of coconut palms and cultivated patches.

The island is surrounded by a long triangular barrier reef, extending six miles to the eastward and four to the north-west. Thru it there are four passages, three on the west and one on the north. The water is moderately deep within the lagoon, except off the S.W. point of the island. There is good anchorage off the main village, Wainggori, in the S.W. bay.

● 312 Water is abundant. It is piped to Waing-gori from a spring in the west end sandstone hill, which is said to run all year round. There is also a fresh water bathing pool near the swamp. Rainwater is caught at Dakuiloa, the other village.

13 In addition to the usual lowland and littoral trees, noted "yasi" sandlewood. Land birds numerous, but no water birds seen. No snakes reported. Aquatic insects numerous, and mosquitoes very troublesome.

361 [161] There are two villages, Wainggori (Waigori) and Dakuiloa, both situated on the south side. The former claimed a population of 250 although the 1921 ~~census~~ census gives the figure 138. There were

13 5. KOMO is a small island of volcanic origin lying 9 miles north of Namuka-i-Lau and 6 miles west by south of Mothe. (S.18° 41', 178° 39' W.). It is sub-crescent shaped, 1 1/2 miles long by 3/8 mile wide. On the north a ridge rises to an elevation of 270 feet from the sea, with moderately steep slopes; covered with grass, scrub, Pandanus and Casuarina trees. The summit is crowned by a small patch of cocoanut palms. The south side and west end are flat with cultivated areas and small groves of cocoanut palms.

Komo Ndriti, a small, rough, wooded islet of upraised coral limestone, lies a half mile off the west point.

A barrier reef encloses these islands on three sides, the northwest being open except for coral heads and a few small patches of reef. Here there are two good ship passages, 320 and 550 yards wide.

512 Although there are one or two small murky streamlets, rainwater is caught and stored in the village for drinking purposes.

13 Birds, lizards, rats and hermit crabs are the only wild land animals. Insects not very abundant and landshells scarce.

361 The village is located on the S.E. side, and consists of about 25
[161] houses. The natives, about 140 in number, are great fishermen, the
226 women using hand nets and basket traps, plated from beach vine, near
227 shore, while the men fish on the reef. They raise a few domesticated
462 pigs, fowl and dogs. Some little cultivation is done, especially of
231 sweet potatoes.
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[p. 31]

13 10. KAMBARA is a moderately large, ovate island of upraised coral limestone with a volcanic intrusion at the N.W. end. The island is situated at the S.W. corner of the Lau group. Its south end rests upon the 19th parallel south and its west reef touches the 179th meridian west. It is 4 1/2 miles long and nearly 3 miles wide.

The greater part of the island is a wooded basin, surrounded by a continuous ridge of upraised limestone, up to 550 feet high, which drops abruptly toward the sea. The highest peak on the island, Delaicloi, is of volcanic material, 470 feet high, at the N.W. corner.

There is no harbor, but anchorage in 12 fathoms, sand and coral, may be had with the usual E or S.E. wind, off the N.W. corner, opposite the village of Tokalau. Landing is easy. At this point the barrier reef which surrounds the island is reduced to a line of coral heads.

[312] Water is not abundant on Kambara, but small supplies might be obtained at the villages, where rainwater is caught and stored in cement tanks.

[24] Part of the N.W. end of the central basin has been cleared of forest and planted to sweet potatoes, yams, manioc, pumpkins, bananas and other native foods. The remainder of the basin is covered by a thick, tropical, "lowland" forest. Along the N.W., N.E. and S.E. sides the beach is a sand flat underlain by corse sandstone and covered with groves of coconut palms and the usual beach growth. Portions of the N., W. and E. sides are percipitous undercut cliff.

The familiar land animals; crabs, lizards and rats present. No snakes seen, although the natives report them present.

361 [161] There are four native villages: Tokalau, at the N.W. corner with 109 natives; Lomati, about a mile down the W. coast, is a small, but [368] clean and prosperous looking village with an attractive church and [161] 46 natives; Undu, at the S.E. end, situated in an extensive coconut grove, with 89 inhabitants; and Nggalinggali (Qaliqali), the largest

13 11. MARAMBO Island is a small, nearly circular limestone island located 7 miles east of the south end of Kambara. (Lat.18° 59', Long. 178° 50' W.) The surrounding reef is fringing in character, about 1 1/2 miles on a side. The island is about 1200 yards in diameter, with a rough flat topped hill on the north, "160" feet high (nearer 200 feet), the summit having a densely wooded depression. Between this hill and the west beach, where there is a low ridge, is a small flat, wooded and with cocomut palms. South of the hill is a broad area of rough "badlands".

There is no anchorage, but landing is good thru a gap in the reef on the north side, leading to a broad sandy beach.

●[312] No fresh water noted.

The surface is covered with the usual thick lowland forest, and the sand beach has an extensive growth of cocomut palms and beach plants, especially at the N. and S.W. ends. The usual birds and small crabs and lizards present.

361 The island is uninhabited most of the time. There are four
245 tumbled-down huts on the west side which are occasionally used by the
484 Kambara natives when gathering copra. The 1921 census gives a pop-
161 ulation of 8. At the time of our visit (Aug.26,1924) one of the huts
484 was occupied by a man and two boys, stranded en route from Komo to
241 Fulanga. Most of the island is too rough for cultivation, but in addition to the two groves of cocomut palms there is a small cultivated area toward the S.W. end.

[p.36]

13 12. WANGAVA island is of rough upraised coral limestone formation, 3 miles N.E. of Kambara. It is shuttle-shaped, 3 1/2 miles long and 1 mile wide. The island is surrounded by a rough marginal limestone ridge, rising steeply from the sea to 350 feet, enclosing a basin, much of which is occupied by a brackish lake. This lake is much more extensive than shown on charts of the island, being over a mile long and filling the entire N.E. two-thirds of the interior. The S.W. end is an undulating wooded plateau, with a few patches of cocomut palms and widl lemon trees. There is also an extensive grove of cocomut palms at the N.E. end of the lake, and small patches along its shore.

The rough, "badlands" of the surrounding ridge are covered with the usual lowland forest. The sand beaches have the usual littoral vegetation, including Erythrina indica, not seen on every island. The interior [134] contains plenty of good soil for cultivation, none of which is in use.

Landing is favorable on the N. side, where there are several sand beaches and the surrounding barrier reef is broken up into patches of coral heads. Anchorage may also be obtained here with an off shore 48 (E. to S.W.) wind. A trail leads into the interior from a sand beach 312 at the N.W. end. No fresh water seen.

361 The island is uninhabited, but there are some huts on the N.W. 161 beach, used by natives from Kambara, collecting copra. In the interior 245 trees have been felled in places. 484

[p. 37]

13 13. TUVUNASITHI is a very small island of upraised coral limestone, 13 miles N.W. of Wangava and 25 miles S.W. of Olorua. It is sub-circular in outline, 1/2 mile in diameter, and rises in a steep, crescent shaped ridge on the east side to 200 feet elevation. It is surrounded by a fringing reef with no entrance. The S. and E. sides are rocky, the N. and W. sandy. The east ridge and west flat both consist of well forested coral "badlands".

There is no anchorage. Landing is possible on the N.W. side at half tide or higher; a small break in the reef giving access to a sandy basin from which the sand beach may be reached.

● [312] There is no fresh water.

There is the usual littoral vegetation, the north and west beaches having more Pemphis than usual. There are small clumps of coconut palms.

245 161 361 The island is uninhabited, but the copra is collected and there is a small hut on the N. beach.

[p. 38]

13 14. AIWA ISLANDS. Two small uninhabited islands of upraised coral limestone, about 12 miles S.E. of Lakemba. (18° 20' S., 178° 41' W.). They are each about a mile long by 600 ~~yards~~ yards wide, lying in nearly a straight line, with their ends close together and connected by a sunken reef. An elongate barrier reef extends out from each side for 3 or 4 miles, being continuous across the south side, but reduced to broken patches and coral heads on the north. The islands rise abruptly from the water in rough undercut cliffs to a height of 150 to 200 feet, but they are comparatively flat and even on the tops.

Anchorage may be had on the N. side of the western island, there being a broad clear entrance to the lagoon on the N.W. Landing is good in a small sandy bay at the east end of the western islet. It is more difficult, but possible, on the eastern islet, in places along both the N. and S. sides, the latter being better at low tide.

There are numerous caves in the limestone walls, and one large broken in cavern in the east central portion of the western islet, at the bottom of which there is a pool of brackish water. There is no [312] fresh water on the islands except immediately after rains, when a little rainwater collects in open depressions.

The interior flats are covered with the usual lowland vegetation, open and park-like. There is a patch of introduced weeds and a few coconut palms near the sand beach on the western islet. On the eastern islet there is a small area of reed or <u>nasau</u> grass, with Pandanus trees. There is no cultivation.

[423] A flock of goats was placed on the islets by the late native owner, a chief residing on Lakemba. There are the usual birds, lizards, crabs and snakes. The islands are occasionally visited for copra and goat hunting.

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[p. 40]

13 15. LAKEMBA is a large volcanic island located at approximately the center of Lau, (18° 12' S., 178° 47' W.). It is nearly oval in outline, 5 1/2 miles east and west by 3 1/2 miles north and south, with a wooded limestone point extending south another mile from the center of the south side. The interior is high, rounded and grassy, with numerous radiating valleys, and several peaks, all of about the same height, up to 720 feet elevation. At the N.W. end there is a conspicuous, wooded, flat-topped peak of upraised coral limestone, rising percipitously to a height of about 400 feet.

There is a well situated harbor for small craft on the S.W. side, off the village of Tumbou. It is difficult of access, thru a 30 yard entrance, because of the tide rip. Larger vessels can find anchorage within the lagoon formed by the barrier reef which extends several miles to the eastward, there being an entrance on the south-east. The island is surrounded by a fringing reef. There is an anchorage outside the reef off the west end, with an off-shore wind. On the north side the reef dries at about a quarter tide, forming a broad mud flat.

[317] Water is abundant and fairly accessable. There is a stream in every valley, and also a convenient pool on the beach near the west end anchorage, behind which rises an elevated limestone bluff. Supplies [366] may be obtained both at Tumbou and at a store near this west end pool.

The hills are covered with reed (or nasau grass), Pandanus, scrub, [241] and Casuarina trees. The valleys are fertile with extensive cultivated patches. A continuous line of coconut groves, together with other beach plants, fringe the shore. The limestone areas are well forested and on the east side, along the shore of the lagoon, there are extensive mangrove thickets.

Small animals and insects as on other islands of the group. The mosquitoes were abundant and troublesome. Quite a variety of bird life.

13 19. KATAFANGA (or Katavanga) is a small island of limestone and volcanic material, lying 25 miles S.E. of Munia and 19 miles N.N.E. of Tuvatha'. (S. 17° 51', 178° 43' W.) It is 3/4 mile long and 800 yards wide on the north, tapering toward the south, and rises in two rounded hills to a height of 180 feet. The northern third of the island is densely wooded, rough upraised coral limestone; the southern two-thirds, rounded volcanic material, covered with grass and groves of coconut palms. The transition between the two is the most striking seen in Lau, as sharp as if cut by a knife. The southern portion is bordered by a broad beach of sand and slab sandstone.

The island is surrounded by a barrier reef thru which there is a passage on the north side which will admit small vessels drawing 10 feet or less. This passage is not the eastern one, generally indicated on charts, but the narrow one directly north of the N.E. point of the island. In it there are two or three coral heads, but with a favorable tide and commanding breeze small vessels may enter. A desirable 361 anchorage is to be had off the S.E. side of the island, opposite the owner's house, where landing is good.

423 295 The island is freehold property, owned by Mr. T.O.U.Stockwell, who lives on the island and is engaged in producing copra. There is no 464 native population other than his six workmen. Water may be obtained 312 together with small supplies of yams, sweet potatoes, papayas, pigs, etc.
262 Bird and insect life abundant on this luxurient little island. The 13 usual lizards and land crabs present in some numbers.

[p.51]

13 20. VEKAI is a small coral islet, 30 feet high and about 200 yards long, situated on the east inner edge of a circular reef, six miles W1 by S. from Katafanga. The lagoon is about 2 miles across with a boat entrance on the N.W. side (2 fathoms). The islet is wedge-shaped, with small sand beaches in the S.E. bay. The west side rises perpendicularly from the water, but the east slope is gradual, with small pockets running back from the sandy coves. These are filled with stunted trees (Tournefortia, Hernandia peltata, and Ficus), and herbs, vines and a shrub festoon the rough ridges. A small patch of kurr grass has somehow been introduced. There are four small detached rocks situated nearby on the reef: one on the west, one off the south point, and two off a projecting S.E. point.

[312] No fresh water. Saw neither lizards or snakes, although both may occur. The white and brown Pierid butterfly is present and several other interesting species of insects.

This islet is especially interesting because it forms a transition between the nearly bare rocks such as Katei Viti and Bacon I. and the small islets, like Vanua Masi, on which trees have become well established, dirt and sand accumulated and cocoanut palms taken root.

[p.52]

13 21. TUVUTHA' is a high, moderate size island of upraised coral with intrusions of volcanic material, 5 1/2 miles south of Vekai. (S.17° 40', 178° 48' W.) It is triangular in outline, 3 1/4 miles long, 1 3/4 miles wide at the north end, and tapering toward the S.S.E. The rough, heavily forested limestone cliffs, rising to a height of 750 to 800 feet on the west, enclose a central basin. The southern end of this is partly filled by a volcanic ridge, covered with grass, Pandanus, and low scrub. The northern portion of the basin is partly wooded, with groves of coconut palms and cleared cultivated areas. There are but [487] two trails leading into the interior. One scales the steep cliff behind Tinoa village and enters by a pass in the high ridge on the S.W. side. The other crosses a low place in the N.E. ridge, behind a sand beach and small volcanic knoll, opposite a boat crossing in the reef.

The island is surrounded by a barrier reef, 400 to 600 yards wide and about 1/2 mile off shore. Anchorage may be had outside the reef at the S.W. end, in the lee of a small horn. There are two boat entrances, one on the west, about 1 1/4 miles N.W. of the village, and the one at the N.E. end. Boats may also cross the reef at high tide near the anchorage at the S.W. corner.

361 The inhabitants, about 100 in number, live in one village, Tinoa, [161] on the S.W. side. Good water may be had from a spring here, but fruit, 312 vegetables and coconuts are only obtainable in moderate quantities. 262 The soil in the basin is fertile, but the difficulty of access prevents 134 extensive agriculture.
241

There are two small reefs, Tavunukui Wai and Tavunukui Vanua, to 13 the south of Tuvutha'. The latter contains a sand cay four feet high.

[p. 54]

13 22. NAIAU is a high limestone and volcanic island, 16 miles N.W.of Lakemba and 20 miles S.W.of Tuvutha'. (S.17° 58', 179° 04' W.) The island is 3 1/2 miles long by 2 miles wide, and is surrounded by a fringing reef. The high marginal ridge of upraised coral limestone, which rises percipitously on the north to 580 feet elevation, surrounds a dry central volcanic basin, carpeted with grass, scrub and Pandanus. The ridges are well forested.

There is no anchorage for vessels, but boats can cross the reef opposite the village of Salia on the east side, and also on the N.W. side, at high water.

312 Water is not abundant, but may be had at the villages, together with limited supplies of staple groceries and vegetables.

361 There are three villages on the island. Salia on the east side
[366] has a native population of 140 and two chinese stores. Narothivo
177 is located about a mile and a quarter to the N.N.W. and has 117
[161] people. Liku, with 59 natives is on the south-east side. There is
489 no landing at Liku, and all supplies and copra has to be carried
13 by trail over the ridges and across the central basin. Gaps in the limestone ridges on each side with gradual slopes of volcanic material leading up to them, make this trail more accessable than
181 that on Tuvutha'. The people appear to be prosperous and produce
245 quite a little copra from the extensive coconut groves.

172 On the high ridge S.W. of Salia there is the site of an
361 ancient fortified village, perched at the top of a cliff.
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[p.56]

13 25. VANUA VATU is a small island of limestone and volcanic formation, 25 miles S.S.W. of Naiau and 22 miles N.N.W. of Tavunasithi. Like Naiau, it consists of a dry, grassy basin of volcanic material surrounded by a ring of wooded upraised coral limestone hills rising to 300 feet elevation on the S.E. and S.W. The elevation of the central basin is from 200 to 250 feet. The island is slightly over a mile square.

It is surrounded by a barrier reef which joins the shore in several places on the west side. On the N. and N.E. this reef lies from 3/4 to 1 mile off shore, but is close in for the rest of its length. With an off shore wind, small craft can anchor over a 9 fathom shelf close to the reef in the N.W. cove. From here a boat passage leads into a sandy basin, but a second reef, between this and the village can be crossed only at high water.

361 There is a single village, Taira, one of the neatest and cleanest seen in Fiji, at the N.W. corner. Contrary to the statement of lack of 181 262 food made in the Pilot book (H.O.166,p.375), we found the people quite 312 propperous and both food and water fairly abundant. The central basin 13 is dry and rocky, supporting only grass, scrub and Pandanus, but small 134 pockets of fertle soil among the limestone hills have been cleared and [241] crops of sweet potatoes and yams are raised.

[p.58]

13 24. THITHIA (pronounced thē-thē-ä) is a moderately large, nearly circular island of volcanic and limestone formation, 17 miles N.W. of Naisu and about the same distance S.S.W. of Mango. The island is about 4 miles in diameter, with the interior undulating grassland, rising in several peaks to a height of over 500 feet. Delana Bo, east of the center of the island, is said to be the highest point, but two peaks on the west marginal ridge are as high or higher. As usual, the ridges of upraised coral limestone are marginal, but here they are somewhat reduced in extent, there being also volcanic ridges on the south, west and north sides. A moderately large stream, [312] flowing to the N.E., drains the central portion, and there are numerous smaller streams. Good water is plentiful.

The island is surrounded by a fringing reef, 300 to 800 yards wide. There is a good anchorage off the village of Tarukua, at the N.W. point, with the prevailing S.E. to E. winds. Here landing is good at any time of the tide. There is also a temporary anchorage off Tambuta Plantation, a mile to the south. There is a small break in the reef opposite 60 yards wide the village of Lomati, but as there is very little protection from the prevailing wind, vessels seldom anchor here.

Snakes are ~~abbb~~ said to be abundant. There are numerous lizards and land crabs. Besides the usual land birds, introduced mynahs and "magpies" are abundant.

There are several caves in the N.E. cliffs, some containing bats, [135] and one said to have a deposit of low grade phosphate.

36 [161] Thithia is one of the most advanced and prosperous islands of Lau. There are five villages with a combined population of over 400. [622] The residence of the Bula[1] is at Tarukua, at the N.W. end, which has 75 [161] natives and a small Chinese store. The district hospital, with a [366] native practitioner in charge, is located here. Mambula', at the S.W. 119 [743] [759]

1 [Buli or chief -- analyst]

[p.60]

13 25. MANGO is a moderately large limestone and volcanic island, 8 miles south of Kanathea, 20 miles W.N.W. of Tuvutha', and 17 miles N.E.E. of Thithia. (S.17° 27', 179° 09' W.). It is surrounded by a fringing reef, about 1/2 mile wide. On the north there is a wide gap in the reef, forming an excellent anchorage with the prevailing S. to E. winds. The island is nearly circular, 3 miles in diamtere, and reaches an elevation (Mt.Rider) on the south of 730 feet according to the owner (the Pilot Book, H.O.166, p.372, gives 670 feet). Two other high volcanic hills overlook the west coast, and there is one nearly as high in the north ridge.

This marginal ring of hills, partly volcanic and partly of upraised coral limestone, encloses a broad central basin which is at present 245 thickly planted to cocomnt palms. It was formally used for the [248] cultivation of sugar cane, and prior to that for raising cotton. The [249] old sugar mill still stands near the owners houses, toward the center 2[illegible]1 of the basin. From it a small tram line runs to the N.E.bay. 491

The island is owned by Mr. James Borron, and is managed by his son. There is no native population other than the workmen employed on the 423 plantation, which are mostly Indians. It is one of the most productive 469 and luxurient islands in Lau, and would be well worth an extended 162 biological survey. There is a dense forest among the limestone hills 13 on the N.E., hanging with tropical vines, and with lianas up to 15 inches in diameter. The volcanic hills are covered with the usual grass and scrub, and here and there are groves of Casuarina trees. A small lake, in the N.W.gap, supports a flock of wild ducks, and other bird life is abundant.

●312 Water is abundant. A large stream drains the central basin, flowing N.E. to the nearly enclosed bay. There are also several small lakes and pools of fresh water.

245 At present about 500 tons of copra are produced annually. A herd

13 26. KANATHEA is a circular island of volcanic material, 2 to 2 1/2 miles in diameter, lying 7 miles west of Vanua Mbalavu and 8 miles north of Mango. (8.17° 15', 179° 10' W.) It is surrounded by a fringing reef, and from the east side a loop of barrier reef extends about 6 miles to the N.E., enclosing a spacious lagoon. On the north [509] side there is an indentation in the shore reef within which small craft may anchor within a few hundred feet of a small wharf. The island is undulating and hilly, with several peaks of fair height, the highest (830') overlooking the N.W.shore. On the north-east rises a hill, on the S.E. side of which is a conspicuous thumb-like shaft of volcanic rock. The hills in several places rise in sheer cliffs of this material.

[312] Water is abundant, the interior being drained by several streams.

[245] The valley bottoms and more gradual slopes are thickly planted with coconut palms. The summits of the hills are partly wooded.

423 245 233 136 248 249 162 The island is privately owned and over 600 tons of copra are produced annually. 700 head of cattle are pastured and flocks of ~~turkeys~~ turkeys roam the hills. In former times cotton and later sugar cane were successfully grown. There is no native population, all the workmen being Indians.

13 As bird life is carefully protected, insects are somewhat reduced in numbers. A strict quarentine is also maintained against weeds.

[p.66]

[VANUA MBALAVU I.]

361 [505] the establishment of a good stable government in the western part of Fiji, and cutter service between the various islands and Levuka and Suva, most of its prosperity has vanished.

Another large village is Mualevu, at the east foot of Koro Mbasanga, [366] [312] This village has a good store and an abundant water supply, piped down from the adjacent valley, which contains the only real stream seen [161] [487] on the island. The population is given as 196. All the villages are connected by good trails.

241 The island is not as extensively cultivated as it might be. There are small areas of native food stuffs planted in the valleys and on the lower slopes behind the various villages. And the flats are occupied 13 by small groves of coconut palms. But most of the limestone region remains in native forest, and much of the grassy volcanic ridge is left in that state.

[312] [366] Water is not very abundant, but may be obtained at the villages, especially Mualevu. Supplies may be secured there and at Lomaloma.

Anchorage is good in many of the bays, besides at Lomaloma, and landing is possible anywhere in the volcanic region and in many of the limestone bays. The limestone country is extremely rough and uninviting, but pockets may be made to support groves of coconuts, as at Nambavatu.

The "Bay of Islands", south-east of Ngillangilla, contains one long low island and several small islets. Here anchorage is good. Andawathi I. (250') and Yamuthaloa I. (160') lie to the S.S.E. of this bay.

[312] There is a hot spring near the gap between the volcanic and limestone formations at the south end.

[p. 69]

13 28. AVEA is a small island composed of elevated coral limestone and volcanic material, lying a little over a mile off the N.E. side of Vanua Mbalavu. It is 1 3/4 miles long by 1/2 to 5/8 mile wide, pointed at both ends and rising to a height of 600 feet. The center is a small, narrow, wooded plateau, from which rise the two peaks, Salia (600'), and Sangawelangi (about 500'). The slopes rise abruptly from a narrow beach covered with coconut palms. The island is fringed with a coral reef on the east side and is connected to the north reef by a coral strip, over which small boats can pass at any time of tide. On the S.E. side is a grassy volcanic hill, the slopes of which are under cultivation.

361 161 312 487 The village, Avea, is located on the S.W. point and has a population of about 60 natives. There is a small freshwater pool at the foot of a cliff on the south end. A good trail leads from here to the village.

172 The remains of an ancient village occupies part of the flat-topped plateau.

13 29. Malata is a small wooded island, of partly limestone and partly volcanic material. It is a continuation S.S.E. of the limestone ridge at the south end of Vanua Mbalavu, with which it is connected by a broad reef which dries at 3/4 ebb tide, with a gap of only a few hundred feet. The island is 1 1/2 miles long by 1/2 mile wide, and rises to a height in the center of 420 feet.

[361 291 345] The village is situated on the N.E. side, where there is a grassy and partly cultivated volcanic hill, with a grove of coconut palms. Other portions of the island are also of volcanic formation.

30. Susui is a somewhat larger island of limestone and volcanic formation, lying to the eastward of the south-east point of Malata, with which it is connected by a reef which dries at 1/2 tide. It is 2 1/3 miles long by 3/4 mile wide. The western half is of wooded, elevated coral limestone,

13 Sl. MUNIA is a small volcanic island, 2 1/4 miles long by 1500 yards wide, lying 3 1/2 miles E.by S. of Susui and 15 miles E.by N. of Mango. A high ridge traverses the island, reaching a height of 950 feet near the center. The island is surrounded by a fringing reef, which connects it with the south side of the berrier reef which surrounds the Exploring group. The island is entirely made up of volcanic material.

423 Munia is privately owned, by Mr. H.H. Steinmetz, an Englishman, who
162 produces copra. His homestead is located on the S.E.side at a place
245 where there is a small bight in the reef. Here a pier has been built
361 out nearly to deep water. Anchorage here is fair, except when the
504 strong
13 wind is from the S.E.to N.E. A better anchorage may be found in the lee of the island. Good paths traverse the island and its slopes are
487 thickly planted with coconut palms. Water is fairly abundant, there
312 being several wells.

Mr. Steinmetz has kept careful meteorological records for the
127 past 29 years (1924). A summary of his rainfall data is given in the introduction.

464 There is no native population on the island other than the workmen.
161 or
It formally possessed native inhabitants, however, and bones and ethno-
[172] logical objects have been dug up about the homestead.

[p.75]

13 32. THIKOMBIA - I - LAU is a small limestone and volcanic island located on the east side of the lagoon, 5 1/2 miles N.E. of Munia. It is trregularly rectangular in outline, 1 1/4 by 1 1/8 miles, and rises to a height of 550 feet. The western part consists of a volcanic plateau surrounded by a ring of coral limestone hills, thus forming a raised basin, similar to Vanua Vatu. The eastern part is a steep hill with spurs of volcanic conglomerate, separated from the western mass by a low divide connecting the heads of two deep valleys. The south and east sides are furrowed by small valleys or pockets running back from the sea. Here the beach is alternately volcanic rock, sand and sandstone.

361 [161] 291 The village of Thikombia, on the S.W. end, consists of a dozen houses, with a population of 50. There are extensive cultivated areas in the volcanic basin, and small groves of coconut palms along the beach and in the N.E. and S.E. valleys. Water is not abundant, rainwater being caught ●312 and stored in a cement tank at the village.

13 487 764 172 Vessels may anchor in the lee of the island, and landing is good both at the village and on the north sand beaches. Trails lead up onto the plateau from both the north and south sides. A burial cave containing numerous skeletons was explored on this plateau.

[p.76]

13 35. The SOVU ISLANDS, three small uninhabited limestone islets, are situated on the north side of the lagoon, 4 miles E. by N. from Avea, and 6 miles N.by W. of Thikombia-i-Lau.

The larger ~~&&&~~ islet, on the west, is about 3/8 mile long by 100 to 200 yards wide, with a height of 230 feet. It is composed of very rough upraised coral limestone, rising abruptly from an undercut ledge on all sides, and is similar to the Yangasa islets. It is densely covered with lowland forest, herbs and vines.

The middle islet is subcircular, with gentle slopes, about 200 yards in diameter and about 60 feet high. There is a small sand beach on the N.W. and another on the S.E. The slopes are wooded and there are a few coconut palms. It is composed of elevated coral limestone, but is less rough than the larger islet.

The small, eastern islet is elliptical in outline, about 125 yards long, 40 to 50 yards wide, and 60 to 75 feet high. Its rough coral sides rise abruptly from the water, and its top is covered with vines, scrub, and a grove of native fan palms. There are also a few of these palms on the largest islet.

The usual lizards, water snakes and land crabs, including the large red-brown coconut crab were present. No fresh water was seen on any of the ~~&&~~islets. ●[312]

Anchorage is good on the lee side of the islets. Landing is possible on all three, but easy only on the middle islet.

[p.77]

13 [161] 34. The KIMBOMBO IS. are a group of 3 small, uninhabited islets, 6 miles north of the N.W. end of Vanua Mbalavu and 13 miles eastward of Naitaumba. They are surrounded by a barrier reef, 4 1/2 miles E.& W. by 3 miles N.& S. An entrance on the N.W. admits vessels into the lagoon, where good anchorage may be found.

The largest islet, the southeastern one, is sub-crescent-shaped, about 300 by 400 yards. It is composed of exceedingly rough coral limestone and surrounded by an undercut shelf. The islet slopes up gradually from the N.& W. to a height of 190 feet, to fall sheer to the water on the east. The slopes are densely covered with the usual trees, shrubs and herbs found on rough limestone islands. There is no fresh water [312] and insect life is scarce. A number of "flying foxes" (fruit bats) and the usual land crabs were seen. There are two small rocks off the N.W. side.

The middle islet, although only 200 or 300 yards to the N.W., is composed of conglomerate and bedded tuff of volcanic origin. The bedded strata dip to the E. and N.E. at an angle of about 30°. The islet is 100 by 60 yards and 120 feet high. It slopes up gradually from the S.E. with a cliff on the N. and N.W. A sand beach borders the W. and S.E. [361] sides, with a hut and small grove of coconut palms. The rounded summit is covered with small trees, and the slopes with casuarinas.

The small islet, on the W., is a steep pinnicle of tuff and conglomerate, about 100 feet high. completely surrounded by a sand beach, with coconut palms on the south and a few small trees on the summit. A line of reef runs out to a patch of flat rocks on the N.E., and a similar reef connects the islet with two flat rocks to the south.

114 The observations of Agassiz (Bull.Museum Comparative Zoology, XXXIII, p.88, 1899), that the highest island is volcanic and the other two of elevated limestone, is incorrect.

[p.79]

13 55. WAILANGILALA is a flat sand island underlain by coral limestone, a mile long and 600 yards wide at its widest ~~part~~ part. It is the most northern of the Lau Group, lying 18 miles N.N.W. from Kimbombo Islets. (S.16° 45', 179° 06' W.). The island is surrounded by a barrier reef, 2 1/2 miles wide (E.& W.) by 3 3/4 miles N.& S. Thru this there is an entrance on the west 240 yards wide which admits vessels into the lagoon, where good anchorage may be found.

The island is thickly covered with littoral plants and cocoanut palms, reaching a total height of 70 feet above sea level. Toward the north there is a bare narrow isthmus, with a wooded section beyond, giving the appearance of two islands.

349 361 241 On the S.W. side is a 95 foot circular, white iron tower, with a flashing white light, visible 15 miles. The lighthouse keeper and his assistant have neat substantial homes near by. They cultivate small garden plots and dry copra from the extensive cocoanut grove. Some

● [312] vegetables and papayas may be obtained. Rain water is stored in a tank.

114 An account of a boring made on this island in 1897 is given by Alexander Agassiz in the Bulletin of the Museum of Comparative Zoology, Cambridge, Vol.XXXIII, pp.45 to 48, 1899. The island must have changed considerably in shape since that time, as it does not at present agree with maps given on pages 45 and 46. Even the position of the lighthouse is different.

[p.81]

13 86. NAITAUMBA is a trapezium-shape volcanic and limestone island, lying 15 miles N.W. of Vanua Mbalavu and 18 miles S.W.of Wailangilala. It is surrounded by a barrier reef which lies from 1/4 to 3/4 mile off shore. On the west the reef is reduced to a line of coral heads and patches. Here small boats may enter. Vessels may anchor, with an off shore wind, on a narrow shelf off this west side.

The island is 2 miles N.& E. by 1 1/2 miles S.& S. A central basin is surrounded by limestone and volcanic hills, the highest, on the S.E., reaching an elevation of 610 feet in a flat-topped volcanic peak rising with steep slopes. The limestone portions, especially on the N.E. and N.W. are densely wooded; the volcanic hills are covered with the usual grass, scrub and pandanus; and the basin contains an extensive grove of coconut palms.

423 The island is privately owned by Mr.C.M.Henning, who resides at a
361 homestead on the west side. Considerable copra is produced. Fresh
245 water is abundant, and small quantities of produce, turkeys, etc.,
312 might be obtainable at the homestead. Good trails traverse the island.
487 There is no native population other than the plantation workmen.
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464

The MALIMA Islets, two small uninhabited islets lying 6 miles S.E.
13 of Naitaumba, were not visited. They are surrounded by a continuous circular barrier reef, about 2 miles in diameter, with a small boat passage on the north side. The larger islet reaches a height of 130 feet in a conspicuous lump on its S.W. end. The lagoon contains numerous rocks and coral heads.

[p.83]

13 37. YATHATA (or Cap island, so called because its profile resembles a
[103] cap with button) is a limestone and volcanic island, lying 18 miles S.W. of Naitaumba and 19 miles west of Kanathea. (S.17° 16', 179° 32' W.) It is surrounded by a fringing reef which also encloses the low limestone island of Kaimbu and several smaller islets and rocks. There is a boat passage on the N. side with good landing on a sand beach toward the N.E. end. There is no anchorage.

The island is 1 1/2 miles E.& W. by 1 1/2 miles wide. Toward the center there is a steep, flat-topped, wooded limestone peak, 840 feet high and on the S.E. a rounded, grassy volcanic hill. The coast on the east and N.W. is sandy with groves of coconut palms, and there are
[241] cultivated areas on the S.W. side of the central peak.

36 The village, with 25-30 native houses and a frame church, is located
368 on the east side. S.W. of the village is a small fresh water pool. The
312 island is traversed by trails. The ruins of an ancient fortified village
487 occupies the summit of the central peak, Na Koro Levu (840'). The vol-
172 canic hill, called Dilla Thata, is about 500 feet high.
712
13

38. KAIMBU was not visited. It is about 1 1/2 miles long (NW-S.E.), by
13 1/2 mile wide. It is composed of elevated coral limestone, with a flat surface ~~average~~ 150 feet high. Portions are wooded, and others partly
[241] cultivated. The small village is on the N.W. side.
[361]

The small sand islet of Mukuluve, between Yathata and Kaimbu is densely covered with coconut palms. The 90 feet elevation is to the top of the vegetation. The other small islets, 20 to 30 feet high, are mostly coral limestone and of no great consequence.

[p.85]

13
[103] 40. VATU VARA I. (or Hat island, because of its resemblence, in profile from the E. and W., to a slouch hat) lies 9 miles south of Yathata. (S.17° 26', 179° 32' W.) It is surrounded by a fringing reef with a small shallow lagoon on the west. This island is the highest in Lau, the bold central peak rising to a height of 1630 feet. The slopes
[172] of this peak rise percipitously to a flat, crater-like summit, where the
[712] ruins of a fortified village are located.

The island is sub-circular, about 1 1/4 miles in diameter, with a square point on the S.E. It is composed of upraised coral limestone, densely wooded, and with small groves of cocoanut palms in pockets around
423 the foot of the talis slopes, and on the beaches. It is privately owned
361 by the estate of the late Captain Wilson. The neat, substantial home-
245 stead is located on the west side. Copra is produced.

13
502 Landing may be made without difficulty on a sand beach on the N. side, thru a small break in the reef, marked by a beacon.

464
167 There are no inhabitants except the caretaker and a few workmen.
161 Water is not abundant, and but little cultivation is done.
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[p.88]